

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date:

Region: Winston-Salem Regional Office
County: Alamance
NC Facility ID: 0100010
Inspector's Name: Taylor Hartsfield
Date of Last Inspection: 02/17/2016
Compliance Code: 3 / Compliance - inspection

Facility Data Applicant (Facility's Name): Stericycle, Inc. Facility Address: Stericycle, Inc. 1168 Porter Avenue Haw River, NC 27258 SIC: 4953 / Refuse Systems NAICS: 562213 / Solid Waste Combustors and Incinerators Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V				Permit Applicability (this application only) SIP: 02D: .0516, .0521, .0524, .1100, .1111, .1206, .1806 NSPS: Subpart IIII NESHAP: Subpart ZZZZ PSD: n/a PSD Avoidance: n/a NC Toxics: 02D .1100 112(r): n/a Other: 40 CFR Part 62, Subpart HHH			
Contact Data						Application Data	
Facility Contact Alan Skrzypczak Facility Manager (336) 578-8901 PO Box 310 Haw River, NC 27258	Authorized Contact Alan Skrzypczak Facility Manager (336) 578-8901 PO Box 310 Haw River, NC 27258	Technical Contact Alan Skrzypczak Facility Manager (336) 578-8901 PO Box 310 Haw River, NC 27258	Application Number: 0100010.15A Date Received: 04/02/2015 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 05896/T24 Existing Permit Issue Date: 11/06/2015 Existing Permit Expiration Date: 01/31/2016				
Total Actual emissions in TONS/YEAR:							
CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2015	0.2400	18.01	0.8500	0.5300	0.7500	0.0791	0.0690 [Hydrogen chloride (hydrochlori)]
2014	0.2300	13.57	0.8000	0.5400	0.5900	0.5823	0.5189 [Chlorine]
2013	0.2700	14.26	0.7600	0.4700	0.8100	0.1990	0.1171 [Hydrogen chloride (hydrochlori)]
2012	2.47	23.60	0.9300	0.5200	1.63	0.4808	0.3039 [Hydrogen chloride (hydrochlori)]
2011	2.61	24.84	0.9800	0.5100	1.76	0.8321	0.5316 [Hydrogen chloride (hydrochlori)]
Review Engineer: Russell Braswell Review Engineer's Signature: Date:					Comments / Recommendations: Issue 05896/T25 Permit Issue Date: Permit Expiration Date:		

1. Purpose of Application:

Stericycle, Inc. (Stericycle) currently operates a facility in Haw River, NC, under Air Quality Permit 05896T24. This permit has an expiration date of January 31, 2016. On April 2, 2015, Stericycle submitted this application in order to renew the permit. Because the renewal application was received at least nine months before the expiration date of the permit, the existing permit will remain in effect, regardless of the expiration date, until this application is processed.

With the renewal application, Stericycle requested:

- a. The permit include the alternate control scenario allowed for by the US EPA,
- b. The permit fully incorporate 40 CFR Part 62, Subpart HHH,
- c. Correct several typos, and
- d. Incorporate new site-specific operating parameters.

During the renewal process, there were several discussions with Stericycle and its representatives. In these discussions, Stericycle requested:

- a. Lower the maximum charge rate,
- b. Remove and/or change regular TAP and lead emission testing,
- c. Remove VE testing
- d. Remove the CO CEMS requirement, and
- e. Remove the secondary chamber residence time limit.

The renewal process and these requests are discussed in this review.

2. Facility Description:

"Stericycle, Inc. is a hospital, medical, and infectious waste incineration facility consisting of two identical units. According to [Alan] Skrzypczak, the facility operates 24 hours per day, 7 days a week for 52 weeks per year."¹

Note that this facility is considered a Title V facility not due to potential emissions, but because of 40 CFR 60.32e(i). This rule requires that Stericycle obtain a Title V permit regardless of any other requirements.

3. History/Background Since the Previous Permit Renewal:

- February 7, 2011 Permit T18 issued. This action renewed the permit and also added MACT Subpart ZZZZ requirements, new emission limits under 02D .1206, and a CO CEMS requirement at the DAQ Director's request.
- May 26, 2011 Permit T19 issued. This action was an administrative amendment to correct the CO CEMS installation deadline.
- June 6, 2011 Application .11B received. This was a TV-Minor application.
- March 1, 2012 Permit T20 issued in response to application .11B. This action added new control devices to the permit in order to ensure compliance with the new emission limits added in the T18 permit.

1 Taken from Taylor Hartsfield's inspection report dated February 17, 2016.

- March 25, 2013 Application .13A received. This application was later split into .13A and .13B. Both applications were TV-Minor.
- May 17, 2013 Permit T21 issued in response to application .13A. This action added a new emergency generator to the permit.
- March 21, 2014 Permit T22 issued in response to application .13B. This action allowed for the use of urea (in addition to ammonia) for SNCR NOx control.
- November 13, 2014 Application .14A received. This was a TV-Minor application.
- June 29, 2015 Permit T23 issued in response to application .14A. This action added carbon bed control devices (and corresponding permit requirements) and corrected TAP testing requirements. Stericycle had asked for new operational parameters as allowed by 40 CFR Part 62, Subpart HHH, but this request was denied.
- August 4, 2015 Stericycle filed a petition to challenge permit T23.
- November 6, 2015 Permit T24 issued in response to Stericycle's objections to permit T23.

4. Application Chronology:

- April 2, 2015 Application .15A received.
- April 20, 2015 Email sent to Lindsey Kroos² asking about any updated operating parameters. Lindsey responded on April 21 stating that a separate permit application (.14A) had been submitted with updated parameters.
- June 29, 2015 Permit T23 issued in response to application .14A.
- August 4, 2015 Stericycle filed a petition to challenge permit T23.
- November 6, 2015 Permit T24 issued in response to Stericycle's petition.
- November 16, 2015 A preliminary draft of the permit conditions for 02D .1100 and .1206 were sent to DAQ staff for comment.
- December 11, 2015 After incorporating internal comments, a preliminary draft of the permit conditions for 02D .1100 and .1206 were sent to Lindsey Kroos for comment.
- January 6, 2016 Lindsey Kroos requested additional time to review the preliminary drafts.
- February 5, 2016 Ben Snowden³ requested additional time to review the preliminary drafts. Ben also said that he would respond with a draft version of the entire permit.

² Project Manager for All4 Inc., a consulting company working for Stericycle.

³ Attorney with Kilpatrick Townsend & Stockton, LLP, a law firm working for Stericycle.

- April 26, 2016 Ben Snowden submitted a draft permit for DAQ's consideration. This draft proposed combining the requirements of 02D .1206 and 40 CFR Part 62 Subpart HHH and removing TAP testing requirements.
- May 24, 2016 In a meeting with William Willets, Mark Cuilla, Russell Braswell, and Ben Snowden, DAQ expressed several concerns with Ben Snowden's draft permit.
- May 27, 2016 Ben Snowden sent an update to his earlier draft permit by email. Ben also asked about the possibility of removing the CO CEMS requirement from the permit.
- June 2 – July 8, 2016 DAQ researched the origin of several stipulations in the existing permit.
- July 19, 2016 DAQ internal meeting to discuss the possibility of removing the TAP testing and CO CEMS requirements. The outcome of the meeting was that DAQ would not support removing either requirement during the permit renewal process, however, DAQ did support synchronizing mercury testing with the rest of the TAP testing.
- July 19, 2016 Russell Braswell sent the initial draft permit to DAQ staff (Mark Cuilla, William Willets, Alan Drake, Ray Stewart, Taylor Hartsfield) and Ben Snowden. For a summary of comments received, see Attachment 3.
- August 30, 2016 Meeting between Stericycle staff and representatives (Don Nuss, Ben Snowden, Alan McConnell) and DAQ staff (Russell Braswell, William Willets, Mark Cuilla, Ray Stewart, Lisa Edwards) regarding the removal of CO CEMS and changes to TAP testing.
- September 8, 2016 Ben Snowden submitted a proposal for a new TAP testing schedule, removal of VE testing, and the removal of the CO CEMS.
- September 21, 2016 DAQ internal meeting with Director Sheila Holman regarding Ben Snowden's proposal. At the outcome of the meeting, the Director expressed tentative support for the TAP testing schedule and tentative disapproval of the CO CEMS removal. She planned to discuss the proposal with Assistant Secretary Jon Evans before making a final decision.
- October 17, 2016 Sheila Holman made the following final decisions: 1) allow the proposed changes to TAP testing, and 2) deny the request to remove the CO CEMS.
- XXXXXX final draft before public notice
- XXXXXX public / EPA notice

5. Changes to the existing permit:

The previous permit contained numerous inaccuracies and repetitions and was arranged in a confusing order. The entire permit has been rewritten in order to follow DAQ's general format for permit conditions and in order to correct all of the errors from the previous permit. A summary of errors corrected include:

1. The permit stipulations for 02D .1100 and .1206 no longer reference 02D .0524 as a regulatory citation. 02D .0524 does not apply to the incinerators.
2.
 - i. The permit stipulation for 02D .1100 no longer reference lead or visible emissions because these pollutants are not regulated by .1100. They are instead regulated by 02D .1206.
 - ii. The permit stipulation for 02D .1100 no longer references 02D .0408. This is an ambient air quality standard for lead that does not directly apply to the facility. Lead is regulated by 02D .1206.
 - iii. The permit stipulation for 02D .1100 now requires triennial mercury and cadmium testing on both incinerators. Previously, testing was required for all TAPs on one incinerator every other year. This change ultimately increases the frequency of testing at the facility.
 - iv. The testing requirement is now linked to the testing requirement in 02D .1206.
3.
 - i. The permit stipulation for 02D .1206 no longer includes a secondary chamber residence time limit. This requirement was a holdover from NC's older incinerator rules and no longer appears in the modern rule.
 - ii. Stericycle had petitioned the EPA to be allowed to not operate the control devices while no waste was being charged in the incinerators. The EPA agreed with this petition. This scenario is now included in the 02D .1206 stipulation.
 - iii. The permit stipulation for 02D .1206 now requires triennial testing for lead, cadmium, and mercury based on Stericycle's proposed TAP testing schedule.
4. The permit has been rewritten such that the permit conditions for 02D .1100 and .1206 now only appear in the incinerators section and not the "facility-wide" section.
5. The permit condition for NSPS Subpart IIII has been rewritten to account for regulatory updates.
6. A permit shield section (Section 2.3.) has been added to the permit. This clarifies that the facility is not directly subject to NSPS Subparts Ce or Ec.

6. Regulatory Review:

Stericycle is subject to the following regulations, in addition to the requirements in the General Conditions:

- 15A NCAC 02D .0516 "Sulfur Dioxide from Combustion Sources"
- 15A NCAC 02D .0521 "Control of Visible Emissions"
- 15A NCAC 02D .0524 "New Source Performance Standards" (40 CFR Part 60 Subpart IIII)
- 15A NCAC 02D .1100 "Control of Toxic Air Pollutants"
- 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (40 CFR Part 63 Subpart ZZZZ)
- 15A NCAC 02D .1206 "Hospital, Medical, and Infectious Waste Incinerators"
- 15A NCAC 02D .1806 "Control and Prohibition of Odorous Emissions"
- 40 CFR Part 62, Subpart HHH "Federal Plan Requirements for Hospital/Medical/Infectious Waste Incinerators Constructed On Or Before December 1, 2008"

An in-depth discussion of several of these rules is not necessary because there have been no changes to the rule or Stericycle's method of compliance. For a discussion of MACT and NSPS requirements, see Section 7. For a discussion of 02D .1100, see Section 8. For a discussion of 02D .1206 and 40 CFR Part 62, Subpart HHH, see below:

a. 15A NCAC 02D .1206 "Hospital, Medical, and Infectious Waste Incinerators"

This rule applies to hospital, medical, and infectious waste incinerators (referred to as "HMIWI" or "incinerator" in this discussion) in the state of North Carolina. Note that this rule has not been incorporated under NC's state implementation plan [SIP], and is therefore considered State-Enforceable Only.

- *General requirements under the rule*

The rule has several different requirements based on the size, location, and construction date of the incinerator. Neither of the incinerators at this facility are considered small nor remote. Both of the incinerators at this facility were constructed before March 16, 1998.

In general, this rule requires that the incinerators at this facility comply with the emission limits of 40 CFR Part 60, Subpart Ce, and comply with the compliance requirements (e.g. testing and operation standards) of 40 CFR Part 60, Subpart Ec. The specific requirements of Subpart Ce and Ec are directly referenced by the rule. In addition, the rule also requires that the incinerators comply with emission limits established as part of 02D .1100, perform emission testing as required by the Director, and install continuous emission monitoring systems (CEMS) for carbon monoxide (CO) and O₂.

In order to comply with the emission standards, Stericycle operates several control devices. Each incinerator is equipped with: selective non-catalytic reduction, venturi scrubber, packed bed scrubber, and a carbon adsorption bed. The rule requires that Stericycle establish and continuously monitor several operating parameters for each control device. The limits for each parameter are established during emission testing, and Stericycle may perform new emission testing at any time in order to establish new operating parameters. As part of this permit renewal, Stericycle requested that the maximum charge rate for each incinerator be lowered from the previous permit, based on recent emission testing.

- *Operating control devices when no waste is being incinerated*

On August 26, 2014, Stericycle petitioned the US EPA to be allowed (under 40 CFR Part 62, Subpart HHH) to operate only combustion controls during periods where no waste is being charged in the incinerators. US EPA approved this petition on November 14, 2014. In its approval letter, US EPA asked that NC DAQ "...ensure that the operational scenarios where Stericycle is proposing to use the 'combustion control only' option are adequately reflected in the Title V operating permit." Although this approval was given under 40 CFR Part 62, Subpart HHH (which is a Federal rule and therefore, not enforceable by NC DAQ), 02D .1206 does include an option for alternate control devices via .1206(g). This requires Stericycle to comply with all of the requirements under 40 CFR 60.56c, which includes 40 CFR 60.56c(j):

"The owner or operator of an affected facility using an air pollution control device other than a dry scrubber followed by a fabric filter, a wet scrubber, a dry scrubber followed by a fabric filter and a wet scrubber, or selective noncatalytic reduction technology to comply with the emissions limits under §60.52c shall petition the Administrator for other site-specific operating parameters to be established during the initial performance test and continuously monitored thereafter. The owner or operator shall not conduct the initial performance test until after the petition has been approved by the Administrator."

In the scenario where no waste is being incinerated and no control devices are operating, the continuously monitored parameter would be the waste charge rate. Any time the waste charge rate is not 0 lb/hr, the normal control device configuration would apply. According to Stericycle's petition, the only time this scenario applies is during periods of startup and shutdown. See Attachment 2 for the letter from US EPA to Stericycle regarding the combustion control scenario.

- *Additional permit requirements not explicitly listed in 02D .1206.*

The permit condition contains several requirements that do not explicitly appear in 02D .1206. The below list contains these requirements and the justification for their inclusion or exclusion:

1. A prohibition on burning dental waste

This language was incorporated into the permit with the T17 permit revision. This was added as a method to reduce mercury emissions.

2. An explicit list of the types of allowable waste

Stericycle proposed the current list of allowable waste in the 0100010.01A permit application. The R13 permit incorporated this list. DAQ has had no reason to change or update this list. Note that 02D .1206 does not exclude a HMIWI from burning non-hospital/medical/infectious waste.

3. Operational requirements for the sulfur-impregnated carbon beds

Stericycle added the carbon beds in response to the more stringent emission standards that took effect on July 1, 2013. This type of control device is not specifically mentioned in 02D .1206 (or 40 CFR 60.56c). However, 40 CFR 60.56c(j) allows for the use of control devices not specifically mentioned elsewhere in the rule. For such devices, the applicant must propose site-specific operating parameters. All of the carbon bed requirements in the permit were proposed by Stericycle and approved by DAQ with the T23 permit.

4. A minimum secondary chamber residence time limit

The previous permit had the following permit condition:

"2.1.A.1.b.6: Gases generated by combustion shall, for a period of not less than one second, be subjected to a minimum temperature of 1,762.8 degrees Fahrenheit in Unit 1 and 1759.5 degrees Fahrenheit in Unit 2."

Stericycle requested that this requirement be removed from the permit. This requirement appears to be a hold-over from previous incinerator regulations. It no longer appears in 02D .1206, and has therefore been removed from the permit.

5. Triennial testing for lead, cadmium, and mercury

This is based on Stericycle's proposed emission testing plan to replace biennial testing for all TAPs. Stericycle will no longer test for all TAPs, only cadmium and mercury. In addition, Stericycle will test for lead (which is not considered a TAP).

- *Stericycle's request to not operate the CO CEMS*

In an email conversation with Ben Snowden, he asked if it would be possible to remove the CO CEMS requirement from the permit. Instead of operating CO CEMS, Stericycle would perform regular CO emission testing as required by 15A NCAC 02D .1206(d)(4) and 40 CFR 60.56c(c)(2).

15A NCAC 02D .1206(f)(2) allows the Director of DAQ to require that a CO monitor be installed on an incinerator. Starting with the T18 permit revision, the Director required Stericycle to install a CO monitor. Because the Director required the CEMS to be installed, only the Director has the authority to remove it.

Stericycle sent a proposal to the Director on September 8, 2016 that requested the CO CEMS requirement be removed. The proposal pointed out that Stericycle the CO CEMS generally showed a wide margin of compliance with the CO emission limit. However, the proposal also included data that showed at least one exceedance of the CO emission limit. Additionally, the proposal pointed out that Stericycle is also required to operate an O₂ sensor, and both of these monitoring devices are used to determine good combustion practices in the incinerators.

After several internal discussions, the Director decided that the CO CEMS requirement should not be removed. Her reasoning was that the use of only an O₂ sensor does not reliably demonstrate compliance with the CO limit, especially given that there is no O₂ emission standard, only one for CO. Ultimately, the proposal did not provide a compelling reason why DAQ should allow for less stringent CO monitoring.

- *Stericycle's request to cease testing for lead emissions*

In the previous permit, emission testing for lead was included under 02D .1100 "Control of Toxic Air Pollutants". This was a mistake because lead is not a listed pollutant in that regulation. Instead, it should have been included under 02D .1206. Therefore, lead testing now appears under this rule instead. During the permit renewal process, Stericycle requested that regular testing for TAPs and lead be removed from the permit. This request was ultimately denied. In response, Stericycle proposed a new TAP testing schedule that was ultimately approved. For more discussion of this topic, see Section 8.

- *Stericycle's request to cease testing for visible emissions (VE)*

In the September 8, 2016 proposal, Stericycle requested that the VE testing requirements be removed from the permit, stating that VE testing was not required by any regulation.

40 CFR 60.56c(c)(1), incorporated by reference under 02D .1206(d)(4), requires annual VE testing. After this was pointed out, Stericycle withdrew this specific request.

b. 40 CFR Part 62, Subpart HHH "Federal Plan Requirements for Hospital/Medical/Infectious Waste Incinerators Constructed On Or Before December 1, 2008"

40 CFR Part 62, Subpart HHH applies to HMIWI located in states that have not fully incorporated 40 CFR Part 60, Subpart Ce into their SIP. North Carolina is one such state, and therefore Stericycle is subject to this rule.

This rule is Federally-enforceable only. It is not referenced in the NCAC. Compliance with this rule is entirely determined by the US EPA, not NC DAQ. The Title V permit will include a reference to Subpart HHH, but no specific requirements.

- c. Potential applicability of 02D .0503 "Particulates from Fuel Burning Indirect Heat Exchangers" and 02D .0515 "Particulates from Miscellaneous Industrial Processes"

Both of these rules regulate particulate emissions, and could potentially apply to this facility.

02D .0503(a)(d) states that this rule only applies to sources where "...fuel is burned for the purpose of producing heat or power by indirect heat transfer." The incinerators operate using direct heat transfer, so this rule does not apply.

02D .0515(a) states that the rule applies to "...any industrial process for which no other emission control standards are applicable." 02D .1206 has an applicable particulate standard, so this rule does not apply.

7. NSPS, MACT/GACT, PSD, 112(r), RACT, CAM:

- a. New Source Performance Standards (NSPS)

1. *Subpart Ce "Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators"*

This rule is a set of emission guidelines for HMIWI that were constructed before the applicability date of NSPS Subpart Ec.

This rule is explicitly not incorporated under NC's SIP (see 15A NCAC 02D .0524(b)(7)). Therefore, this rule does not apply to this facility.

Despite not being part of NC's rule for New Source Performance Standards, the emission limits listed in Subpart Ce are referenced under 15A NCAC 02D .1206(c)(2) and (3).

2. *Subpart Ec "Standards of Performance for New Stationary Sources: Hospital/ Medical/ Infectious Waste Incinerators"*

This rule is a set of emission guidelines for HMIWI that were constructed after June 20, 1996.

The HMIWI at this facility were constructed before this date, so this rule does not apply.

Note that, while the rule does not apply to this facility, 15A NCAC 02D .1206 references many of the requirements under this rule (e.g. 15A NCAC 02D .1206(d)(4) references 40 CFR 60.56c).

3. *Subpart IIII "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines"*

This rule applies to all stationary, compression ignition, internal combustion engines constructed after 2008. The rule has several different categories of engines, but the only applicable one to this facility is "emergency-use".

In general, emergency-use engines have the following requirements:

- Purchase and operate an engine certified to the emission standards in the regulation,

- Operate only during periods of emergency or testing/maintenance,
- Install a non-resettable hour meter,
- Burn fuel with a sulfur content 15 ppm or less, and
- Operate and maintain the engine according to the manufacturer's specifications.

The rule has recently been revised. Under previous versions of the rule, some non-emergency operation was allowed. However, this is no longer the case. The permit has been updated to reflect this change.

b. Maximum/Generally Available Control Technology (MACT/GACT)

1. Subpart DD "National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations"

According to 40 CFR 63.680(a), this rule only applies to off-site waste handlers that are also a major source of HAP. This facility is not a major source of HAP, so the rule does not apply.

2. Subpart ZZZZ: "National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines"

This rule applies to all stationary internal combustion engines. According to 40 CFR 63.6590(c)(1), the only requirements for this engine under this rule is to comply with the requirements of 40 CFR Part 60, Subpart IIII.

c. Prevention of Significant Deterioration (PSD)

This facility has not triggered a PSD review. In addition, this facility is not avoiding the requirements of PSD or triggering a PSD review.

d. Section 112(r) of the Clean Air Act

The facility does not appear to store any 112(r)-subject materials above their respective thresholds. Therefore, the facility does not have any increased requirements under Section 112(r) of the Clean Air Act.

e. Reasonably Available Control Technology (RACT)

The facility is not located in an area of ozone nonattainment, therefore RACT does not apply.

f. Compliance Assurance Monitoring (CAM)

CAM applies to a control device if the following criteria are met:

1. The unit being controlled is subject to a non-exempt emission standard (as defined by 2D .0614(b)(1)),
2. The control device is being used to comply with the emission standard, and
3. The unit being controlled has potential emissions of the pollutant subject to the emission standard of greater than major source thresholds.

This facility does not have potential emissions of any pollutant above the major-source threshold. Therefore, CAM does not apply to any control device.

8. Toxic Air Pollutant Emission Limits

Stericycle has performed pollutant dispersion modeling in order to demonstrate compliance with the acceptable ambient limits (AALs) listed in 15A NCAC 02D .1104. The modeling demonstrated that Stericycle would not violate any AAL provided emissions remained under the modeled emission rates. These emission rates are listed in the permit under 15A NCAC 02D .1100.

In order to demonstrate continued compliance with these emission limits, Stericycle must comply with several operational and monitoring requirements. In addition, Stericycle must perform regular toxic air pollutant (TAP) emission testing⁴. As part of the renewal, the TAP testing schedule has been synchronized such that mercury testing occurs at the same time as the rest of the TAPs.

In the previous permit, the requirements for 02D .1100 were spread out and intermixed with 02D .1206. The permit condition has been rewritten to correct this issue. Additionally, in the previous permit, the condition for 02D .1100 referenced lead and visible emissions. Neither of these are regulated under this rule. Those pollutants have been moved to the 02D .1206 permit condition.

During the course of renewing the permit, Stericycle requested that regular TAP testing be removed from the permit. Stericycle suggested that recent addition of new control devices should be enough to demonstrate continued compliance, and that regular emission testing was unnecessary. DAQ ultimately disagreed with this assertion. In response, Stericycle sent a proposal on September 8, 2016 to DAQ detailing a revised TAP testing plan. The proposal pointed out that emission testing consistently showed a margin of compliance of 95% or more for most of the tested TAPs, so continuous testing of these TAPs should not be required. The only pollutants that showed a smaller margin of compliance were lead, mercury, and cadmium. Stericycle proposed testing both incinerators for these pollutants on a triennial basis (at the same time as the 02D .1206 testing for PM and HCl). For comparison, the existing permit requires that Stericycle test one incinerator every other year for all TAPs.

Director Sheila Holman agreed with the proposal and asked that it be implemented. This decision was based on:

1. The very wide and consistent margin of compliance for the large majority of tested TAPs, and
2. The overall increase in testing frequency for the incinerators:
 - a. The current permit requires testing one incinerator every two years. Essentially, an individual incinerator is to be tested every four years.
 - b. The proposal requires testing both incinerators every three years, meaning that an individual incinerator will go less time before being re-tested.

Because this testing is for lead, mercury, and cadmium, and these pollutants are also regulated by 02D .1206, the testing requirement will be added to the permit stipulation for 02D .1206. A paragraph will be added to the permit stipulation for 02D .1100 requiring compliance with the 02D .1206 testing requirement.

9. Facility Emissions Review

This permit renewal is not expected to change the facility's potential emissions.

4 Regular TAP testing was originally added to the permit with the R9 revision, issued March 20, 1998. It was added in response to a public hearing, and at the request of the WSRO Regional Supervisor.

For a historical review of emissions from this facility, see the summary table on the first page of this review.

10. Compliance Status

a. Notices of Violation/Recommendation for Enforcement since the previous renewal

- February 17, 2012 NRE issued because Stericycle accidentally activated the bypass stack for a period of approximately five minutes. No enforcement action taken.
- October 8, 2013 NOV issued because Stericycle did not submit a compliance demonstration for the new emission limits that took effect on July 1, 2013. Stericycle performed emission testing on November 19, 2013 in order to demonstrate compliance.
- January 15, 2014 NRE issued because the emission testing performed on November 19, 2013 showed an exceedance of the lead emission limit. Stericycle was issued a fine for the exceedance. Stericycle performed additional testing on February 25, 2014 that showed compliance with all emission limits.
- February 18, 2015 NOV issued because the ammonia storage tank used for the SNCR control ran dry during operation. Stericycle responded to the NOV on March 13, 2015 with a letter detailing new operating procedures designed to prevent this issue in the future.
- November 2, 2015 NOV issued because Stericycle opened the bypass stack for several short durations. A "discontent" employee had knowingly opened the bypass stack when it was not necessary to do so. Stericycle responded to the NOV on November 16, 2015 with a letter detailing new training procedures designed to prevent this issue in the future.

b. Inspection status

The facility was most recently inspected by Taylor Hartsfield on February 7, 2016. Stericycle appeared to be in compliance with the air quality permit at the time of that inspection.

11. Other Regulatory Concerns

A PE seal was not required for this permit renewal.

A zoning consistency form was not required for this permit renewal.

12. Public Notice/EPA and Affected State(s) Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 2Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 2Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA.

Also pursuant to 2Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 2Q .0521 above.

13. Recommendations

Issue permit 05896T25.

DRAFT

Change List

Page(s)*	Section*	Description of Change(s)
Throughout	Throughout	<ul style="list-style-type: none"> Updated permit dates/numbers Fixed formatting issues
	Insignificant Activities List	<ul style="list-style-type: none"> Added source for ammonia storage.
	2.1.A.	<ul style="list-style-type: none"> The permit conditions applicable to the incinerators have all been rewritten to correct errors in the previous permit and to reflect updates in the regulations. Given the extent of the rewrite, there is no simple direct comparison of the old and new conditions. Combined all incinerator requirements under Section 2.1.A.
	2.1.A.1. (15A NCAC 02D .1100)	<ul style="list-style-type: none"> Removed references to lead and VE because they are not part of 02D .1100. Removed reference to 02D .0408 because that rule does not apply to this facility. Changed TAP testing to only include mercury and cadmium because the facility has demonstrated a wide margin of compliance with the other TAPs. Changed TAP testing to require both incinerators be tested every three years (previously was one incinerator every two years).
	2.1.A.2. (15A NCAC 02D .1206)	<ul style="list-style-type: none"> Added a paragraph allowing the Permittee to operate a "combustion control only" mode when not incinerating waste, in accordance with the Permittee's approved petition to the EPA. Added requirement that the Permittee attach the memo approving any new operating parameters in the event of future performance testing. Moved lead emission testing into this permit condition. Lead is regulated by this rule, not 02D .1100 as the previous permit indicated. Added triennial lead, mercury, and cadmium testing based on the facility's proposed testing schedule. Removed the requirement to keep incinerator exhaust in the secondary combustion chamber for at least one second. This requirement no longer appears in the rule.
	2.1.B.3.	<ul style="list-style-type: none"> Updated permit condition for NSPS Subpart IIII to reflect updates in the regulation
	2.3.	<ul style="list-style-type: none"> Added section 2.3. "Permit shield for nonapplicable requirements" Added statement regarding the applicability of NSPS Subparts Ec and Ce.

* This refers to the current permit unless otherwise stated.

Letter from USEPA approving Stericycle's request for a "combustion control only" scenario



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

NOV 14 2014

Mr. Al Burson
Corporate Director of Environmental Quality
Stericycle, Inc.
4010 Commercial Avenue
Northbrook, Illinois 60062

Dear Mr. Burson:

This letter is in response to your August 26, 2014, request for approval of performance test waivers and a proposed site specific monitoring plan for the Stericycle, Inc. facility in Haw River, North Carolina. Stericycle owns and operates two existing hospital/medical/infectious waste incineration (HMIWI) units that are subject to 40 CFR Part 62, Subpart HHH – “Federal Plan Requirements for Hospital/Medical/Infectious Waste Incinerators Constructed On or Before December 1, 2008.” As indicated in the Stericycle request, the federal plan requirements of Subpart HHH apply to the HMIWI units due to the absence of a U.S. Environmental Protection Agency approved state plan implementing the 2009 emission guidelines for existing sources at 40 CFR Part 60, Subpart Ce – “Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators.” In order to comply with the HMIWI emission limits, Stericycle is proposing two different control scheme options for each unit: one during normal operation and one while only natural gas or propane is being fired. The first control scheme would use a wet scrubber system followed by a carbon bed with selective non-catalytic reduction. The second control scheme proposed to comply with the emissions limits uses “combustion control only” when waste is not being combusted in the HMIWI units.

Stericycle is requesting waivers from the performance tests required in the Performance Testing and Monitoring Requirements section of Subpart HHH when operating under the “combustion control only” control scheme. The federal plan requires that initial performance tests be conducted to demonstrate compliance and to establish operating parameters. However, 40 CFR §60.8(b) allows the EPA to waive the requirement for the performance tests if the owner or operator demonstrates by other means that the source is in compliance with the standard. Stericycle provided this demonstration in their request. Stericycle used AP-42 emission factors, operational data, and continuous emissions monitoring system data to make this demonstration, and also proposed specific parameters to be monitored for periods when only natural gas or propane is being fired. Stericycle did not request performance test waivers or request approval of site specific operating parameters for periods when waste is being charged.

The EPA has reviewed the Stericycle request and has determined that it adequately demonstrates that the HMIWI units can comply with the emission limits in Subpart HHH using the “combustion control only” control scheme (i.e., when no waste is being charged to the chamber and while firing natural gas or propane). Therefore, the EPA approves Stericycle’s request for waivers of stack test requirements during the “combustion control only” scenario outlined by Stericycle. The EPA encourages Stericycle to work with the North Carolina Department of Environment and Natural Resources to ensure that the operational scenarios where Stericycle is proposing to use the “combustion control only” option are adequately reflected in the Title V operating permit.

This response has been coordinated with the EPA's Office of Compliance, Office of Air Quality Planning and Standards, and Office of General Counsel. If you have any questions concerning this letter, please contact Mr. Keith Goff of my staff at (404) 562-9137.

Sincerely,



Beverly H. Banister

Director

Air, Pesticides and Toxics Management Division

cc: Ms. Sheila C. Holman, Director
North Carolina Department of Air Quality

Ms. Marcia Mia, USEPA Office of Compliance

Mr. David Cozzie, USEPA Office of Air Quality
Planning and Standards

Mr. Mike Thrift, USEPA Office of General Counsel

DRY

Summary of comments received on the initial drafts

- Ben Snowden (Kilpatrick Townsend & Stockton LLP, on behalf of Stericycle), by email on May 27, July 28, and September 9, 2016

1. Ben pointed out numerous typos throughout the draft permit.

Response: Fixed.

2. The description of CD01 and CD03 are reversed.

Response: Fixed.

3. The maximum carbon bed inlet temperature is important for control of mercury, and should be included in 02D .1100.

Response: I agree with this suggestion.

4. Regularly scheduled emission testing for TAPs should be removed from the permit.

Response: After internal discussion, this request was denied. The September 9 proposal modified this request to require triennial testing for Cd, Pb, and Hg. After consideration by Director Sheila Holman, the modified request was approved.

5. The draft mentions measuring pressure drop across the carbon beds under 02D .1100. Pressure drop is a parameter for the venturi scrubbers, not carbon beds. The pressure drop measurement for the venturi scrubbers is already required under 02D .1206, so it doesn't need to be included under 02D .1100.

Response: I agree.

6. Add a footnote to the emission limit table in 02D .1206 to include the test averaging time shown in Table 1B to NSPS Subpart Ce.

Response: I have added the footnote.

7. Add a footnote to the permit condition for 02D .1206 that states that the facility is not subject to NSPS Subparts Ce or Ec.

Response: This sort of statement is generally left in the permit review or in a separate "permit shield" section. I have added a new section to the permit to incorporate this statement.

8. Make minor corrections to the operating parameter testing list. Also add a footnote that states that the maximum flue gas temperature is measured at the inlet of the carbon beds.

Response: I have made the suggested corrections and added the footnote.

9. Move the table containing the most recent operating parameters into the "Operational Standards" section.

Response: I agree.

10. Remove the requirement to operate a CO CEMS. In conjunction, add CO to the list of pollutants that require regular testing.

Response: This request was ultimately included in a proposal received September 9, 2016. After consideration by Director Sheila Holman, this request was ultimately denied.

11. Give the paragraph regarding the alternative operating scenario its own heading. In addition, add a paragraph stating that Stericycle is not required to perform testing to demonstrate compliance when using the alternate control scenario.

Response: I have given this paragraph its own heading.

Regarding testing for the alternative operating scenario: the exemption from testing was given by the EPA under 40 CFR Part 62, Subpart HHH, not the DAQ. DAQ can reserve the right to require testing, regardless of EPA's approval. At this time, no such testing is required, but DAQ may deem it necessary in the future.

12. Add a note in the permit clarifying that neither NSPS Subpart Ce nor Ec apply to this facility.

Response: I have added a permit shield for nonapplicable requirements. This section includes a statement for both regulations.

13. Remove VE testing from the permit.

Response: 40 CFR 60.56c(c)(1), incorporated by reference under 02D .1206(d)(4), requires annual VE testing. After this was pointed out, Stericycle withdrew this specific request.

- Mark Cuilla (Engineering supervisor, DAQ) by email on July 28 and 29, 2016

1. Mark pointed out numerous typos throughout the draft permit and review.

Response: Fixed.

2. The permit condition for the site-specific carbon bed requirements should include the permit revision that initially incorporated them.

Response: I agree.

3. The permit condition for 02D .1206 contains a table that connects specific parameter exceedances to specific emission limit violations. Is this necessary to include?

Response: This is part of the regulation, albeit in the form of a list instead of a table. Ben Snowden suggested it be listed in a table to be easier to read, and I agreed with that suggestion. Given that it is part of the rule, I feel it should be represented in the permit.

4. The permit condition for NSPS Subpart IIII still mentions non-emergency use. This has been recently vacated and should be removed.

Response: I agree.

5. Should the permit review discuss the potential applicability of 02D .0503 or .0515?

Response: I will include a section in the review discussing why these rules do not apply.

DRAFT